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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,598	08/27/2003	Sun-Tai Kim	2757.2005-000	4965
21005	7590	11/16/2004	EXAMINER	
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			VORTMAN, ANATOLY	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,598

Applicant(s)

KIM, SUN-TAI

Examiner

Anatoly Vortman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The specification appears to be a literal translation from a foreign document and has numerous problems pertaining to the grammar and to the clarity and correctness of the language. The following some examples: "the wires 102 are coincided with a driving voltage of the light emitting diode 122" (p. 5, lines 3, 4); "When a worker fills the receiving chamber 114 of the case 10 with synthetic resin such as epoxy resin, the printed circuit board 120" (p. 6, line 9); "The transformer 140 drops the voltage so that a common alternating current supplied through the wires 102 are coincided with a driving voltage of the light emitting diode 122" (p. 6, lines 22-24); "the cap, which is made PVC" (p. 7, lines 6, 7).

The aforementioned problems also contribute to the difficulties in understanding technical aspects of the invention. For example it is not clear what Applicant had in mind by stating that "alternating current supplied through the wires 102 are coincided with a driving voltage of the light emitting diode 122" (p. 6, lines 23, 24).

The Examiner would like to reiterate that aforementioned are only the examples. The entire specification should be revised carefully in order to correct the aforementioned and remaining similar problems so as to comply with 35 U.S.C. 112, first paragraph. A substitute specification is highly recommended.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “rectified circuit”, “a constant voltage circuit”, “a constant current circuit” recited in claims 3 and 4, and interconnection thereof (i.e. an electrical diagram) must be shown. No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 3 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 3 recites: “wires are coincided with a driving voltage of the light emitting diode, in which the rectified circuit transforms the alternating current to direct current voltage, and the constant voltage circuit and the constant current circuit adjust a intensity of a direct voltage supplied through the wire so that the direct voltage is coincided with the driving voltage of the light emitting diode”.

Claim 4 recites: “in order to harmonize the direct voltage with the driving voltage of the light emitting diode”.

The aforementioned recitations are technically incorrect. It is not clear what the Applicant was trying to convey to the artisan in the art by using the term “harmonizing” while describing the relationship between the direct voltage and the driving voltage? Or what meaning has the phrase “direct voltage is coincided (emphasis added) with driving voltage”? Such terminology is not routinely used in the electrical engineering field and no explanation as to the meaning of the aforementioned terminology had been provided in the specification. Also, the specification does not provide any explanation on how the “rectified circuit”, “a constant voltage circuit”, and “a constant current circuit” are interconnected and cooperate with each other.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by US/5,808,592 to Mizuani et al., (Mizuani).

Regarding claims 1 and 5, Mizuani teaches a light emitting diode assembly (Fig. 1 B), the light emitting diode assembly comprising: a case (3) being open upwards, in which a connecting recess (42) is formed on upper portions of both sides of the case (3) ; a printed circuit board (2) being installed in the case (3) and being mounted on upper sides of a plurality of light emitting diodes (10); a hollow cap (4) being coupled in the connecting recess (42) of the case (3), in which a plurality of wires (12) pass through the cap (4); and a synthetic epoxy resin material (9, 11) for covering the printed circuit board (2), the cap (4) and the light emitting diode (10), the synthetic resin material (9, 11) being filled in the case.

Allowable Subject Matter

7. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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8. The following is a statement of reasons for the indication of allowable subject matter: regarding claim 2, the claim recites: “a guiding pipe, in which a coupling groove is formed”.

The aforementioned limitations in combination with all remaining limitations of the claim are believed to render the claim patentable over the art of record.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

US/6481130, 5950340, 5842297, 5526236, 5276591, 2002/0030992, 2002/0093832, 2003/0167666, 2003/0202349, 2004/0022057, 2004/00415221, and DE/19741585 disclosed various LED assemblies.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Friday, between 10:00 am and 6:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg can be reached on 571-272-2800, ext 35. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AV.

A handwritten signature in black ink, appearing to read 'A. Vortman', followed by a horizontal line.

Anatoly Vortman
Primary Examiner
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